

WHAT IS CLAIMED IS:

1. A communication apparatus for communicating speech and data, the apparatus comprising:

frame controlling means for integrating speech
5 frames, being speech signals made into frames, and data frames, being data made into frames, into integrated frames and performing routing control of the speech frames, the data frames, and the integrated frames;

input processing means for storing and managing at
10 least one of the three types of frames of the speech frames, the data frames, and the integrated frames; and

output processing means for storing and managing the frames transferred, setting a bandwidth ratio of the frames dynamically, and transmitting the speech frames, the
15 data frames, and the integrated frames from on lines.

2. The communication apparatus according to claim 1, wherein the frame controlling means generates the integrated frames by causing the speech frames to occupy
20 bandwidth which the speech frames use and assigning the rest of the bandwidth to the data frames.

3. The communication apparatus according to claim 1, wherein the frame controlling means generates the
25 integrated frames by creating priority information fields for the data frames in which high priority corresponds to connection-mode communication and low priority corresponds

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9. The communication apparatus according to claim 1,
wherein the output processing means generates and outputs
one representative frame when the data frames transferred
5 include identical frames.

10. The communication apparatus according to claim
9, wherein the frame controlling means generates the
plurality of identical frames when the frame controlling
10 means receives the representative frame.

~~11.~~ A communication system for communicating speech
and data, the system comprising:

a telephone switching system;
15 a network connecting device for performing a
connecting process between networks; and
a communication apparatus comprising frame
controlling means for integrating speech frames, being
speech signals made into frames, and data frames, being
20 data made into frames, into integrated frames and
performing routing control of the speech frames, the data
frames, and the integrated frames, input processing means
for storing and managing at least one of the three types of
frames of the speech frames, the data frames, and the
25 integrated frames, and output processing means for storing
and managing the frames transferred, setting a bandwidth
ratio of the frames dynamically, and transmitting the

generated by creating priority information fields for the data frames in which high priority corresponds to connection-mode communication and low priority corresponds to connectionless-mode communication.

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24. The method for integrating speech and data according to claim 21, wherein the integrated frames are generated by creating an information field for controlling common line signals.

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25. The method for integrating speech and data according to claim 21, wherein the frames are stored as the input-side process by switching two storage areas every cycle.

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26. The method for integrating speech and data according to claim 21, wherein the routing control is performed and a switching transfer of the frames is performed for the output-side process, on the basis of

20 information regarding the frames.

27. The method for integrating speech and data according to claim 21, wherein the routing control is performed and transfer scheduling information is generated,
25 on the basis of information regarding the frames.

28. The method for integrating speech and data

